ENGINEERING NEWS-RECORD

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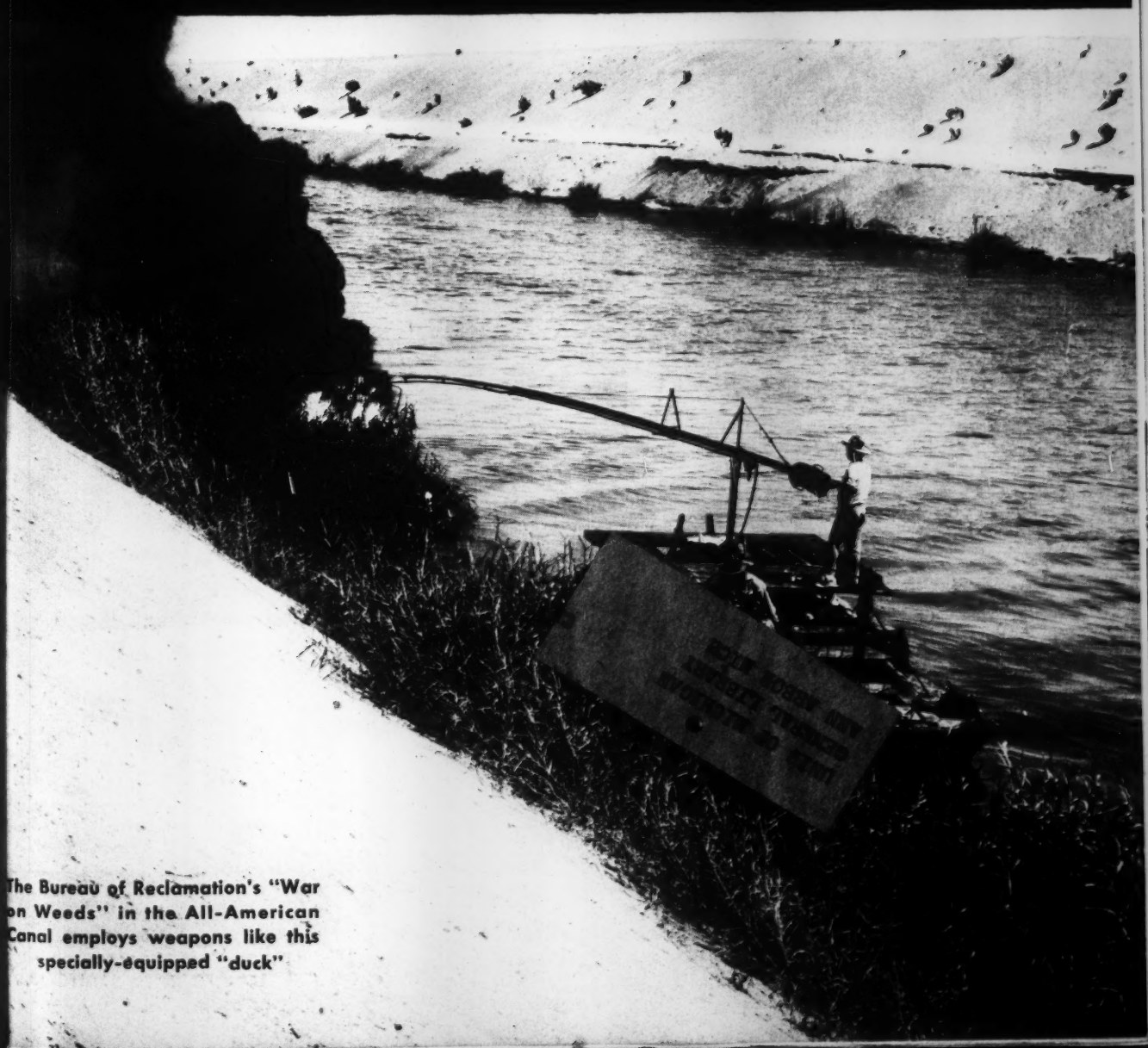
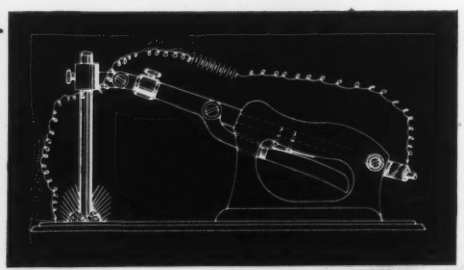


The Bureau of Reclamation's "War on Weeds" in the All-American Canal employs weapons like this specially-equipped "duck"

Slavianoff

Gave Contractors This Priceless Tool

His metallic-electrode welder revolutionized construction methods



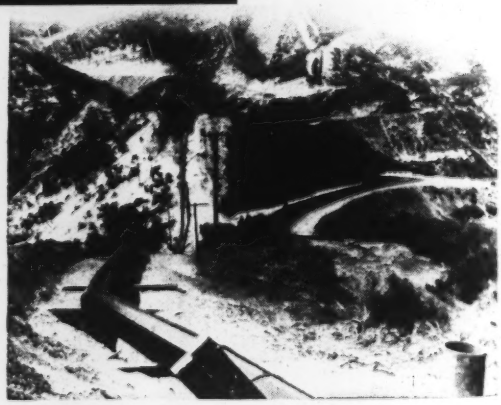
"All-welded construction" is a popular specification today on all types of heavy construction.

Original Benardos carbon-electrode apparatus which was modified by Slavianoff to use metal electrodes.

Back in '92 Slavianoff adapted Benardos' carbon-electrode arc welder to use metal electrodes, for the purpose of filling blowholes in castings. This arc welder, in its modern advanced form, is today the most useful tool available for quiet, fast, economical, metal fabrication.

Throughout the world, contractors rely on arc welding to build lighter, stronger structures in less time. All-welded construction on highway bridges saves an amount of steel approximately equal in weight to the traffic load the completed bridge will carry! Tanks and buildings can be erected in the heart of a residential section quietly, without risking complaints and work stoppage . . . thanks to arc welding. On pipelines, arc welding speeds construction and strengthens the line . . . and, in addition, saves weight and simplifies the application of protective coatings by eliminating heavy flanges at joints.

If you are not utilizing arc-welded construction to its fullest extent, consult your nearest General Electric arc-welding distributor or General Electric Sales Office. They will help you solve your welding problems, and show you the complete G-E line of a-c and d-c welders. *Apparatus Dept., General Electric Co., Schenectady 5, New York.*



On pipelines, arc welding eliminates heavy flanges at joints, simplifies application of protective coatings to the line.

ELECTRIFIED CONSTRUCTION
BETTER PRODUCT ★ LOWER COST

GENERAL ELECTRIC

News of the Week

ENGINEERING NEWS-RECORD • MAY 22, 1947 • VOLUME 138 • NUMBER 21

New pollution control bill written for Congress by FWA

Federal Security Agency would do overall planning, FWA would do engineering under measure—$113.5 million appropriation sought to provide funds

A comprehensive pollution-abatement bill that differs considerably from the several other control bills already introduced was placed before Congress last week by the Federal Works Agency.

The new measure was prepared as a substitute for the Barkley bill (S. 418) introduced Jan. 29 and on which hearings have been held this month by a sub-committee of the Senate Public Works Committee. This subcommittee asked Maj. Gen. Philip B. Fleming, FWA administrator, to prepare the new bill.

The substitute measure proposes what is termed an "expanding approach" to stream pollution control by using the full forces of the Federal Security Agency and the FWA. The previous bills placed the major part of the federal government's work in the FSA. The new measure, according to the FWA, places the health aspect of the program in the FSA and the construction aspects in the FWA. The bill is said to provide for the fullest cooperation between the states and the federal government.

To aid in forming a sound national policy, the bill creates a water pollution control advisory board. This body would be composed of: The Surgeon General of the FSA, who would serve as chairman of the board; representatives of the departments of War, Interior, Agriculture, and the FWA, and five persons (not officers or employees of the national government) to be appointed annually by the President. It is required that one of the appointees be an engineer expert in sewage and industrial-waste disposal work.

FSA makes comprehensive plan

On the Surgeon General—and thus the FSA—would rest the responsibility of preparing, in cooperation with the advisory board, other federal groups and state and local agencies, the comprehensive program of control to be followed. The Public Health Service, (part of FSA) would be empowered to assist state health authorities and other government groups on investigations and surveys needed to aid pollution control.

The bill also authorizes the appropriation of $1,500,000 yearly, beginning with the fiscal year starting June 30, for grants to the local bodies for investigations and studies. This money would be spent under supervision of the Surgeon General in accordance with regulations prepared by the FSA.

Federal assistance for the preparation of detailed planning would be handled by the FWA, which would be authorized to make financial advances to local bodies. Such aid would be repayable, without interest, upon the start of construction of the project for which the advance was made. To permit such aid, the bill authorizes an appropriation to FWA of not over $12,000,000 annually starting with the next fiscal year.

Construction loans

FWA is further authorized to make loans to state and local agencies for the construction of abatement facilities. Limitations on this work would include the following: (1) the priority for the aid would be established by the Surgeon General; (2) no loan could be made for a job not approved by the state health authority for that area and by the Surgeon General; (3) no loan could exceed one-third the estimated cost of a job; and (4) an interest rate of two percent would be charged on the loans. For this type of federal aid a maximum yearly appropriation to the FWA of $100,000,000 is authorized.

The desirability of FWA handling the federal government's engineering work with the program and supervising construction received considerable comment by General Fleming in forwarding his bill to Congress.

(*Continued on page 2*)

Truman disclaims reclamation cut

President Truman has tossed back into the lap of Congress the responsibility for curtailing 1948 Bureau of Reclamation construction.

In a recent letter to Sen. Kenneth S. Wherry explaining the 2-year limitations he imposed on reclamation construction work last summer, the President declared that "It is not anticipated that it will be necessary or desirable to place restrictions on the expenditure of funds available for fiscal year 1948."

Senator Wherry, chairman of the Senate subcommittee now studying the 1948 Interior Department appropriations bill, had asked the President to clarify the status of his "freeze orders" on public works expenditures as specifically applied to Reclamation Bureau work. Largely on the basis of these orders, which limited expenditures to $130,000,000 for construction in fiscal 1947 and to $177,400,000 for all purposes in 1948, the House Appropriations Committee justified the drastic slashes it effected in the bureau's 1948 budget.

The House group announced that in slashing the bureau's 1948 budget, it had considered unexpended funds previously appropriated and carried over by the agency.

However, Interior Department officials claim that a major portion of unexpended Reclamation funds are obligated by contracts let during fiscal 1947, thus considerably reducing the amount actually available for use during the coming fiscal year.

This position was defended by the President, who told Senator Wherry that the $177,400,000 ceiling planned for fiscal 1948 included estimates of all carry-over funds for Reclamation, plus the amounts approved by the Budget Bureau for the agency's 1948 programs. Thus, in effect, Mr. Truman notified the Congress that the bureau's budget was already within the "freeze order" ceiling before it was slashed by the House.

NEWS IN BRIEF

In telegraphic form, here are latest news developments on the engineering and construction front during the week.

Construction—The Rust Engineering Co. has the contract for the design and construction of two new buildings at the *Charleroi, Pa.*, plant of Corning Glass Works—a finishing building of 25,000 sq. ft. and a furnace building of 10,000 sq. ft. . . . As part of its $47,800,000 ten-year construction program, Kentucky Utilities Co., is considering plans for the construction of a new $9,250,000 steam-electric power plant on the Green River near *South Carrollton.* . . .The Florida Industrial Commission will build a $1,250,000 building in *Tallahassee.* . . .Work will start next fall on a $3,000,000 state office building at *Jackson, Miss.* . . . Houston Natural Gas Co. will build a million dollar plant at *Houston, Tex.* . . . Construction of a $1,200,000 chemical specialties plant for E. I. du Pont de Nemours & Co. in *Toledo, Ohio,* is postponed indefinitely on account of increased costs. . . . A $30,000,000 refinery plant expansion at *Houston, Tex.*, will be undertaken by Sinclair Refining Co. . .Work on a $300,000 beet sugar factory for the Canadian Sugar Factories, Ltd. at *Taber, Alta.*

Housing—A 1300-family apartment project in *Los Angeles, Calif.*, to cost $15,000,000, has been announced by President Carrol M. Shanks of Prudential Life Insurance Co. The apartments will be built 10 to 12 units to the acre, leaving 80 percent of the ground for landscaping. . . B. A. Martin plans construction of a 52-unit apartment project, costing approximately $400,000 in *Atlanta Ga.* The 3-building development will be on Cheshire Bridge Road on a 3-acre tract. Smith & Hobbs are the architects and engineers. . . A development of about 500 single houses will be carried out by Pearce & Pearce Co., Inc. of Buffalo in *Tonawanda, N. Y.* . . . *Dallas, Tex.*, has approved a $3,000,000 apartment house project to be constructed on a 27-acre site in the Casa Linda Addition. Carl Brown is the developer of the project which will consist of 324 apartment units. . . Construction of a $1,100,000 apartment building at 731-51 West Ferry St., *Buffalo, N. Y.*, will begin soon, according to Joseph M. Boehm, president of Tudor Plaza, Inc. . . William Q. Bendus has applied to the *Rockford, Ill.*, city council for rezoning to permit him to build an 8-story apartment at 1120-1124 East State St., to be 80 ft. high and to house 100 families. . . An apartment project of 13 four-family dwellings costing about $2,000,000 is being planned for a 27-acre tract immediately south of the Naval Hospital, at *Houston, Tex.* . . . A housing project is being planned for *Indianapolis, Ind.* Named Windsor Village, the project will cost $10,000,000 and provide living quarters for 1,200 families.

Water and Sewers—The city of *Tulsa, Okla.*, awarded a contract for a sanitary sewer project in a 20-block area in the northern part of the city to Paris Cement and Construction Co. . . . Increased costs have boosted estimates on the *Elmira, N. Y.*, water board's construction program from a total of $364 to $465,000, General Manager John G. Copely notified the board members.

Congress considers new pollution control bill

(*Continued from page* 1)

General Fleming stated, "It was the Federal Works Agency, not the Federal Security Agency, that was established to handle non-federal public works programs of the type contemplated. What useful purpose would be served by assigning engineering functions to another organization, when you already have an agency working successfully in that field? The determination of the need for such improvements as sewage disposal plants, while important, is less important than getting such works built. After all, the streams that are being polluted are generally known, and it is also recognized that stream pollution is a health menace. Thus, the health problems are relatively simple compared to the legal, financial, and engineering problems necessary to correction".

Because of all the other major bills that remain to be acted upon before Congress recesses (now planned for July 31), many Washington leaders feel that chances for passage are slim for any pollution control bill this session.

State and county at odds on Texas tunnel work

Texas Highway Commissioners have under advisement a request that Palmer and Baker, Inc., of Mobile, Ala., be designated as consulting engineers on a second Harris County tunnel project near Houston estimated to cost about $8,000,000.

"The commission has not decided which firm to employ as consultants," said Highway Engineer D. C. Greer.

At a recent hearing former County Judge Roy Hofheinz of Houston pleaded for the state to hire Palmer and Baker, who already have been chosen to do the engineering on a smaller companion tunnel project which the county alone is financing.

The Texas Highway Commission has agreed to furnish from its own and federal aid funds all except $2,900,000 of the money needed to build a tunnel beneath Buffalo Bayou at Spillman's Island, near La Porte, in the industrial area on Houston's ship channel. The completed project is estimated to cost $8,000,000, so the state-federal share would be about $5,000,000. The contract specified that the State Highway Department would name the engineers for this job.

Harris County and a navigation district will pay for another tunnel beneath the ship channel near Pasadena, estimated to cost $4,500,000 to $5,000,000. County commissioners have employed Palmer and Baker for this job. There was no official discussion of it, but Parsons, Brinckerhoff, Hogan and MacDonald of New York reportedly have been under consideration to receive the award.

Highway safety action meeting June 18-20

The Action Program group of the President's Highway Safety Conference will hold a meeting in Washington, D. C., June 18-20 to afford an opportunity to discuss the progress made during the last year and to devise additional means of promoting wider adoption of the safety program by states and communities.

Maj. Gen. Philip B. Fleming, Administrator, Federal Works Agency will be general chairman of the meetings of the Conference.

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Cement strike halts construction in New York City and vicinity

Labor trouble continues to harass builders in many sections although wage settlements are reported in some areas

Construction in New York City and elsewhere last week began to show effects of a 3-weeks-old strike of cement workers at 31 of the 33 mills in the Lehigh and Hudson valleys, Maryland and Maine (*ENR* May 15, vol. p. 792).

Six projects of the City Housing Authority were slowed and work was halted on a million-dollar oil storage terminal in The Bronx, and also on runway construction at Idlewild airport.

Repercussions of the strike are felt as far away as Virginia, where three major concrete paving jobs virtually have been halted for lack of cement.

The cement companies and the unions have settled on a 15 cent general wage increase and other issues but are still at odds over a demand by the companies to establish shifts around the clock, seven days a week.

The companies, arguing that other unions in the industry work on this basis, have offered to pay shift differentials for evening and night workers, but have balked at continuing to pay time-and-a-half for all work done by packing workers between the hours of 6 at night and 8 in the morning.

Other labor news

Carpenters on strike in Kokomo, Ind., returned to work at a temporary wage scale of $1.70 an hour, 15 cents above the old rate. The agreements provides that the rate will go up to $1.75 if living costs rise in the next 90 days. Carpenters had been seeking $1.80.

A threatened strike of 700 laborers in Canton, Ohio, and nearby Massillon was averted May 6 when a new 1-year contract was signed with provision for a 15-cent-an-hour wage increase, to replace an agreement which expired April 1. The contract, effective May 7, boosts the hourly laborers' rates to $1.25 an hour and mortar mixers' rate up to $1.30. The A. F. L. locals had earlier rejected an offered 12½-cent increase and filed intentions to strike.

Striking members of the A. F. L. Hod Carriers and Laborers Union and the Southern Ohio Constructors Association have resumed work on general construction in Portsmouth, Ohio, following a wage compromise. The union settled for $1.15 and $1 after asking $1.20 for hod carriers and $1.05 for laborers.

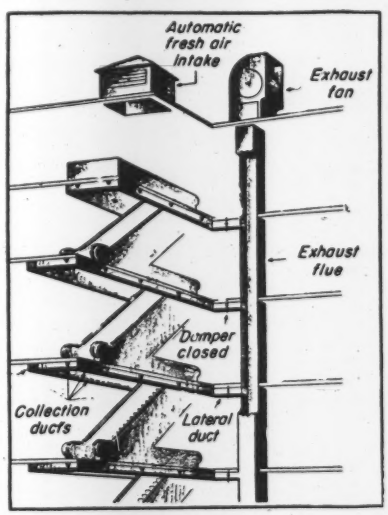
Plumbers in Mercer County (Sharon), Pa., have been granted a 15-cent-an-hour increase, bringing the hourly rate to $1.90. New provision increases the hourly rate to $2 on buildings costing more than $20,000.

Settlements in Twin Cities

The wage increase pattern being set in the commercial and industrial construction field in Minneapolis-St. Paul, Minn., averages considerably higher than the steel-automobile-electrical national pattern calling for a wage hike of 15 cents an hour.

Several building trades unions have won hourly wage increases of 20 to 25 cents an hour, and three groups received 35-cent hourly increases.

A wage increase of about 15 cents an hour for 2,000 Twin Cities members of A. F. L. International Union of Operating Engineers, local 49, has been recommended by a governor's fact-finding commission.



***Fire Control**—Control of the spread of superheated air and toxic gases in fires that occur in multi-story buildings is said to be possible by use of the system sketched at right, developed jointly by Otis Elevator Co., the Westinghouse Electric Corp., and The Grinnell Co. Known as the Exhaust-Water Spray Protective System, the protection is a four-way attack on the problem. Heat from a fire on any floor activates local sprinklers; a "curtain" of sprinklers surrounding the top of stair-well opening; and a roof-top exhaust fan, which draws off smoke and fumes through special collection ducts. The exhaust fan action creates a downdraft of cool air in the stair-well, and halts a tendency for the well to act as a chimney. A working model of the system has been installed in a two-story test building at Cranston, R. I.*

Construction in downstate Illinois was threatened with interruption last week by a strike of teamsters and chauffeurs. Guy Long, president and business agent for Local 532, Springfield International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers, A. F. of L., said that a contract with employers to which both parties agreed, but which the contractors have not signed, carries a clause setting up the "machinery" for settlement of any disputes, jurisdictional or otherwise.

Wage scales of the Seattle, Wash., area will be applicable hereafter to War Department construction work in Alaska by the Birch-Johnson-Lytle Syndicate, General Manager D. L. Cheney has announced. The agreement has been approved at Washington, D. C. The combine holds a contract for $51,000,000 of airbase construction at Anchorage, Nome and Fairbanks.

New labor laws in Texas

Gov. Beauford Jester of Texas has signed two labor bills recently passed by the legislature. One of the bills forbids public employees from striking or using labor unions for collective bargaining. The other bill holds labor unions liable for damages arising in labor controversies and picketing judged by a court to be breaches of contracts.

This brings to five the number of labor bills signed by the Texas governor. A sixth labor bill has been passed and is now on the governor's desk for signature. It forbids deductions to be made from an employee's wages, exclusive of social security and federal income withholding taxes, without the employee's written consent.

Negotiations in Indianapolis

The Building Contractors Association of Indianapolis, Ind., is negotiating new contracts with several unions, and has signed agreements with some calling for wage increases of 25 cents and more an hour. Agreements with the Electrical Workers Union No. 481 contains a provision for a 1 percent payroll levy, to be borne by the employer, for a pension fund.

The group is signing a new contract with the bridge, structural, and ornamental iron workers union calling for an hourly wage increase of 25 cents to $2.12½. Agreement has also been reached with the Teamsters, Chauffeurs, Warehousemen and Helpers for job-site trucking work. The new contract calls for $1.22½ an hour for drivers of trucks up to 3 tons. Expired contract was for 97½ cents an hour.

DEVELOPMENTS BEYOND U. S. BORDERS

Digested from reports by Engineering News-Record correspondents and the McGraw-Hill World News Bureau

Oil companies plan still more road and refinery work in Venezuela —Turkey studies possibilities of 12,000-mile road network—Train Italian engineers to teach sanitary engineering—Australian state pushes water and sewerage projects

Venezuela—The Caribbean Petroleum Co. and other associated companies of the Royal Dutch Shell group operating in Venezuela, have outlined plans of operation which will include an increased construction program.

Major project for the remainder of 1947 will be accelerated construction work on the Cardon refinery in the Paraguana Peninsula in northwest Venezuela. Work was started early in 1945, and engineers said that the companies' investment to date approached $13,000,000.

Some 5,500 men are now employed at the Cardon site, erecting the plant itself and the accommodations for the working force that will operate it. Special priorities have been granted for installation of temporary electric light plants, water supplies and a sanitation system. When the "town" is completed, it is expected to have a population of about 10,000.

Lack of adequate water supplies presented some difficulties, but these have been met with the installation of 10 pumping units which supply drinking water to supplement that brought in by tanker for industrial use. The Shell group is studying, in conjunction with the Creole Petroleum Corp. (Standard of N. J.) a project designed to provide a permanent solution for the water problem. This will involve a $3,500,000 joint water line from the mainland near the town of Coro, to service the towns and refineries being erected on Paraguana to house workers employed by the two oil companies.

Roadbuilding active

Shell is contributing, with other oil companies, to finishing the Guarico Highway in the eastern part of Venezuela, where considerable oil drilling is under way. (See *ENR* Mar. 20 vol. p. 432, for a complete description of this project). The road will be 200 miles long when completed, and is estimated to cost about $6,000,000. It is now passable between El Sombrero and Puerto La Cruz, using a ferry to cross the Unare River pending completion of a bridge across the stream.

Aside from main roads, Shell built 35 mi. of roads and many bridges during 1946, and is continuing lateral road building this year.

Water Resources . . . .

Australia—The state of New South Wales has announced a program for water conservation that will involve the expenditure of more than $100,000,000.

The state has work under way on five irrigation dams, and plans are being prepared for a total of 18 storage dams to double the potential irrigated farm area of the state. First of the postwar dams will be Glenbaun Dam, on the Hunter River, which will provide a storage capacity of 120,000 ac.ft. behind an earth-fill structure 198 ft. high and 2,800 ft. long at crest. This project is expected to cost about $5,000,000.

Other current projects include weirs on the Darling River; the 122,000 ac.ft. storage behind Ballyrogan Dam on the Lachlan River.

A $45,000,000 scheme to expand water and sewage facilities of Sydney and its suburbs has also been revived after several years' suspension. Water catchment for the Sydney Metropolitan Water Supply will be increased by a dam located on the Warragamba River.

A major industrial water user in New South Wales has run into trouble trying to pump up underground water from its own property, after town officials in the district invoked a 1905 law which vested all right in natural sources of water in the Crown. Officials contend that the strata tapped by the firm is such a "natural" source.

The water is for use in the projected $16,000,000 Courtauld Rayon plant at Tomago, in New South Wales. Town officials are contesting the company's right to pump 3.5. mg. per week for use in its manufacturing processes, on the ground that such pumping might cause seawater to infiltrate the underground water areas now used for town supplies.

Highways . . . .

Turkey—Pending approval of loans from the United States, the Turkish Ministry of Communications is studying a long-range project to build 12,000 mi. of first class highways as an aid to the economic and cultural development of the country.

The highways would be designed for military as well as commercial use. Economists, in a series of recent reports to government agencies, blame Turkey's inadequate road and rail transport system for holding back the nation's full development.

***Venezuelan Roadbuilding**—Oil company bulldozers must push through heavily forested terrain like that above to build roads for oil operations*

Malaya—The construction of some 50 miles of road on the northeast coast of the Malay Peninsula from Kuantan to Kota Bharu is called by British army engineers an achievement comparable with the construction of the Alaska Highway or the Ledo Road.

Traversing a country that varies from marshlands to rugged foothills, the highway was built by British army engineers, using native labor and some Japanese troops awaiting repatriation.

Ports and Harbors . . . .

Spain—The Spanish government has announced it will undertake the improvement of the port of Seville and the channel of the Guadalquivir River, at a cost of about $8,816,000. The work will include construction of a canal to divert part of the river's flow in order to prevent erosion of the port in seasons of heavy rains, and improvements in handling and storage facilities to make this port capable of handling vessels of up to 15,000 gross tons.

Students . . . .

Italy—When A. E. Williamson—not long ago a lieutenant colonel in the U. S. Army Sanitary Corps—arrived in Rome recently as an engineer for the Unitarian Church Service Committee, he discovered that Italian engineering schools taught almost nothing about sanitary engineering.

With the help of his employers, he promptly started a one-man campaign to remedy the situation that may end by having a profound influence on Italian school curricula.

With the aid of a committee composed of himself, the U. S. military attache at Rome, the Italian secretary-General of Public Health and the chief of malaria control of the UNRRA, Mr. Williamson selected four men—two of them civil engineering professors and two practicing civil engineers, to be sent to the United States for a year's intensive course in sanitary work, both in schools and in practical field work. The two professors—Ettore Messina of Rome University and Alfredo Passaro of the University of Naples,—are now studying at Harvard and Johns Hopkins universities. The others—Renato Pavanello of Rome and Antonio Tomassi of Naples, are at Michigan and North Carolina universities, respectively.

On completion of their work, the school men will establish departments of sanitary engineering at their respective universities; the two practicing civil engineers are slated for posts with the Italian Commission of Public Health.

Highway plans rushed by many states

Extensive highway plans, including several toll turnpike projects, and actual road construction continue to highlight the engineering news from various parts of the country.

The Pennsylvania State Turnpike Commission announced it had retained Roger B. Stone, its former chief engineer, to survey a proposed extension of the toll superhighway from its present eastern terminus at Middlesex, near Harrisburg, to Philadelphia. When the lines have been established and the route approved, the commission will work out a plan to finance the work.

In the meantime, Gov. James H. Duff suggested a system of toll turnpikes for the state and State Representative H. G. Andrews joined the governor's plea, urging that a revenue-producing turnpike program be drafted for presentation to the current session of the General Assembly. Already before the state senate is a proposal for construction of a "tunnel or tunnels" under the Delaware River between Pennsylvania and New Jersey.

In Florida, preparations for a program of county road and bridge construction are taking shape, following court decisions approving the plan of the Florida State Improvement Commission to finance construction by borrowing money. (*ENR*, April 24, Vol. p. 713).

Last week Circuit Judge George W. Tedder validated $250,000 worth of revenue certificates the state agency will issue to finance a bridge over the New River at Fort Lauderdale; another court, at Sebring, validated almost identical certificates for $525,000 to finance a Highlands County road network, and a similar validation suit is pending in Suwannee County, where a $450,000 rural road network is planned.

Oklahoma toll road

By vote of 27 to 12, the Oklahoma Senate passed a bill authorizing construction of the Oklahoma City-Tulsa express toll highway. The measure will become law 90 days after adjournment of the legislature, probably between Aug. 7 and 10.

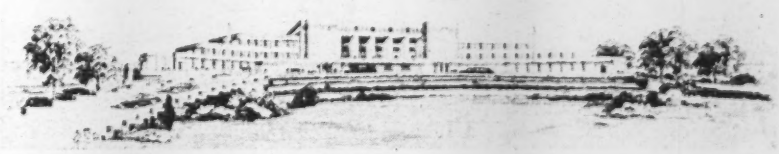
Senate action in passing the bill ended a long fight in the legislature over the proposal which was adopted by Governor Turner as a part of his program after Oklahoma City and Tulsa business men sponsored it as the only means of getting an adequate highway between the two cities.

In a parallel action, the Ohio Senate passed and sent to the House a bill to establish a 5-member Ohio Turnpike Commission which would supervise the building and operation of turnpike financed entirely by toll charges. While the commission was authorized to supervise the construction, maintenance, and operation of the turnpike, only the governor and the highway department could set the location of the road.

The Illinois Senate passed and sent to Governor Green emergency bills authorizing Cook County (including Chicago) to issue a $70-million bond issue for superhighway financing and construction. The bill will permit Cook County officials to issue bonds approved by the voters at a 1946 referendum which was later held invalid on technical grounds by the Illinois Supreme Court.

Georgia begins program

With the awarding of contracts last week for eleven road and bridge projects totaling more than $725,000, Georgia embarked on a program of construction which will total several hundred millions over the next decade. These were the first contracts let this year from federal and state funds totaling $13,000,000, and $22,000,000 which became available a year ago.



***Airport Administration** — Construction will start next year on this $3,500,000 administration building for the San Francisco municipal airfield, the city's utilities commission has reported, if federal airport aid is forthcoming to finance completion of the project. Original estimate for construction of the structure was $2,500,000, commissioners said.*

N.Y. port body reveals airport plans

The Port of New York Authority will spend $100,000,000 on airports in the City of New York in the next seven years and a total of $200,000,000 eventually, according to Howard S. Cullman, chairman of the authority. On June 1, the Port Authority will take over three fields: Idlewild, now under construction but not yet ready for flights; LaGuardia Field, now in operation but requiring extensive rehabilitation; and Floyd Bennett, a Navy field that will be used temporarily. (*ENR* April 3, vol. p. 490).

It is hoped that some operations at Idlewild can be started by October 1, though Mr. Cullman points out that much must be done before the field can be opened to use. Three runways are completed, three more are under construction, and a seventh, for instrument approach, is being considered for early construction. A temporary operations building (9,000 sq.ft. of floor space compared to 100,000 sq.ft. at overcrowded LaGuardia) is available but must be supplenented by Quonset huts or similar structures. There are now only two hangars at Idlewild, both of moderate size and far from adequate for proposed operations. Blowing sand, now only partly controlled by beach grass, continues to present difficulties to operation as does the fact that labor disputes have prevented for two years the installation of telephones.

The Port Authority, said Mr. Cullman, has no grandiose plan for a terminal building at Idlewild but intends to make a structure large enough to house businesses that, with field area rentals, will pay two-thirds of the cost of the port.

Other plans revealed

LaGuardia Field has reached its operating maximum of 350 scheduled plane movements per day and it is expected that by July, 1948, New York City will have nearly 600 scheduled domestic plane movements per day. To rehabilitate the sinking field (*ENR* Jan. 2, vol. p. 10), it is planned to extend the east-west runway across the old seaplane base and maintain three-runway operation of the field during the time that the sinking eastern end of the field is drained and rehabilitated.

Immediately after the Port Authority comes into possession of the city airports on June 1, it is planned to convert Floyd Bennett Field to use for commercial air transportation, under agreements with the Navy for temporary use. It is expected that Floyd Bennett can be made ready by August 1, but the runways at that field cannot handle large overseas aircraft carrying a full pay load.

Mr. Cullman pointed out that major airfields will become community centers —cities within cities. He expects that the New York City and Newark, N. J., airports (The Port Authority is now negotiating for operation of the latter) will have a working population of more than 60,000. By 1960 he estimates that 33,000,000 airline passengers will use the airports each year.

Plan large-span hangar for Rapid City airbase

A reinforced concrete, fire resistant aircraft hangar with a span of 340 ft.—believed to exceed the span of any hangar of this type constructed to date —is being designed for construction at the heavy bomber base in Rapid City, S. D., under the supervision of the Corps of Engineers.

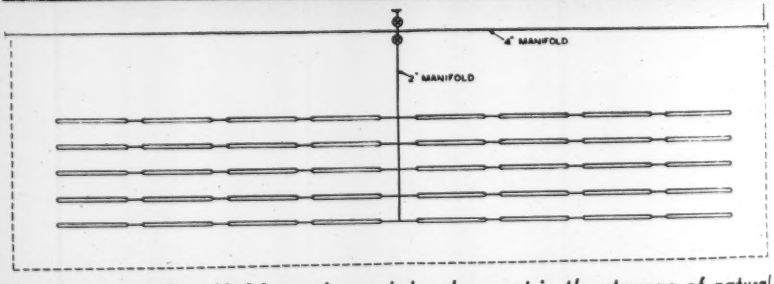
The $1,000,000 structure will be of sufficient size to acommodate the largest aircraft now used by the Air Forces.

The hangar will be of the monolithic reinforced concrete arch type, with a door opening 300 ft. wide by 40 ft. high. An auxiliary tail door 50 ft. wide by 20 ft. high at the center of the opening will permit the passage of the huge tail assemblies of the larger planes without increasing the door height for its full width.

The roof structure is to be divided into units separated by a single transverse joint. The shell is about 3¾ in. thick, strengthened by stiffening ribs on a spacing of 23 ft. 3 in. The clear span between spring lines of the arch is 340 ft.

COSTS FORCE CANCELLATION OF CANADIAN HOUSING WORK

Large-scale housing projects planned for Ottawa, Hamilton and Toronto, Ont., have been cancelled by Housing Enterprises Ltd., because of high costs revealed by bids on the projected work.



***Underground Gas Holder**—A novel development in the storage of natural gas is an underground storage plant worked out and now in use by the Public Service Co. of Northern Illinois, in cooperation with the National Tube Co. A pilot installation (diagram) was made last fall at Kankakee, Ill., and work started last week on a new project at Mount Prospect, Ill. The new installation will have a capacity of 40,000,000 cu.ft. of gas. Pipe sections are fashioned from 24-in. seamless molybdenum steel, ½ in. thick and 40 ft. long, "nosed" at the ends and machined for connection, capable of holding 25,000 cu.ft. of gas at 2,240 lb. pressure. Advantages claimed are ease of servicing and elimination of unsightly above-ground gas holders.*

The Engineering Institute of Canada marks sixtieth year of service

Many attend Toronto meeting as organization reviews its history and future plans—L. R. Grant new president

Holding its technical sessions to matters of a very general nature, the Engineering Institute of Canada concluded its "diamond jubilee" meeting—marking 60 years of service—at Toronto, Ont. May 9.

The more than 1,000 delegates attending witnessed the seating of Lieut. Col. L. R. Grant of Kingston, Ont., as new president, succeeding F. P. Hayes, of Halifax, N. S.

In keeping with the special character of the meeting, and the time of year (EIC meetings are normally held in February) the technical proceedings featured a group of three addresses reviewing the past, present and future of "The Engineer and the Community".

First of these papers was presented by J. G. G. Kerry, 80, retired consulting engineer of Port Hope, Ont., who gave a factual review of the state of engineering in Canada when the institute was founded in 1887, and then traced the development of the organization over its 60 years. L. R. Thomson, Montreal consulting engineer, reviewed the changes in Canadian economy through the war years; and H. Birchard Taylor, of Philadelphia, Pa., called on engineers in future developments to use the same sort of teamwork they employed in the war years, both in engineering and in the social and moral problems of the day.

Atomic energy discussed

The principal technical subject discussed was that of atomic energy, and Canada's contribution to its development. At the opening session, Gen. A. G. L. McNaughton, president of the Canadian Atomic Energy Control Board and Canada's representative on the International Control Commission, spoke on international control problems from a political and technical standpoint. General McNaughton later presided at a technical session, at which three papers were delivered—two by members of the engineering staff of the atomic energy project of the National Research Council of Canada at Chalk River; and the third by C. H. Jackson, chief engineer of Defense Industries Ltd.—the organization responsible for design of that plant.

Other papers presented included a discussion of jet propulsion for aircraft, delivered by Air Commodore Frank Whittle, R. A. F.; an address on "Applied Science in a Changing World", detailing the changing attitude toward research in Canada, by C. J. Mackenzie, president of the National Research Council; and a description of the objectives of the newly-formed Canadian Welding Bureau, presented by R. M. Gooderham.

Awards and officers

For a paper delivered at Montreal a year ago on the winter temperature cycle of the St. Lawrence River, Mr. Kerry was awarded the institute's Gzowski Medal—its highest technical award. Other awards included: Sir John Kennedy Medal for outstanding contributions to engineering, to the late L. A. Campbell of Traill, B. C.; Julian C. Smith Medals for contributions to the development of Canada's resources, to Charles Camsell of Ottawa and J. B. Challies of Montreal, and the Keefer Medal for best civil engineering paper, to R. M. Hardy and E. d'Appolonia, both of the University of Alberta, for their paper on permanently frozen soil.

Honorary memberships were conferred on Dr. F. H. Sexton, former president of Nova Scotia Technical College, Halifax; C. J. Mackenzie; Ernest Brown, former dean of engineering at McGill University, Montreal; and Percy Dunsheath of London, England.

R. S. Eadie of Montreal and W. L. Saunders of Ottawa were elected as new vice-presidents.

R. L. Bloor named to head Army civil works office

Ralph L. Bloor, of Bay Ridge, Md., has been appointed acting head of the Civil Works Engineering Division, Office of the Chief of Engineers. He succeeds Raymond W. Stuck, resigned.

Mr. Bloor received his engineering education at Lehigh University, and has been with the Corps of Engineers for about 20 years at various locations, including the division offices of the Ohio River Division at Cincinnati.

Mr. Stuck, who made a brilliant record with the Corps of Engineers, (*ENR*, Nov. 14, '46, vol. p. 634) is now associated with Royal B. Lord, former major general, U. S. Army and chairman of the board of the World-wide Development Corporation of New York. The corporation has been engaged to make a survey and handle part of the engineering work on President Peron's "5-year plan" in Argentina.

Bureau of Reclamation (H. W. Meyer) photo

War on Weeds—This former Army amphibious truck—known to servicemen as a "duck"—now does peacetime duty as one of the Bureau of Reclamation's chief weapons for the control of weeds and brush that grow on the banks of the All-American Canal in Southern California. Equipped with a 600-gal. tank for oil and a 32-ft. boom ending in six burner nozzles, the apparatus shoots flaming oil from the nozzles under 400-lb. pressure. Maneuvering equally well on the canal berm or in the water, the rig is able to reach hitherto inaccessible growths. The cover photo shows the rig in action.

HIGHLIGHTS OF MUNICIPAL DEVELOPMENTS

Summarizing current activities in city engineering and construction throughout the country.

Baltimore voters approve $39.5 million construction bonds—Many water, sewer projects advanced—Louisville considers $3 million city-county-state office structure—Street improvement, parking facility plans announced

Voters of Baltimore, Md., last week had approved more than half of a proposed $60,000,000 in bond issues to finance a series of civic improvements. Most of the $39,500,000 in bonds approved will go for construction work.

The biggest single item approved was a $22,000,000 issue to finance new school construction and new equipment for the city's schools.

Next largest item included was a $6,000,000 loan which virtually assures completion of the new municipal airport at Friendship Church—where actual construction got under way a few days before the bond election.

Other matters approved included: $5,000,000 for sewers and drainage work; $2,500,000 for construction of a municipal stadium; $1,000,000 for provision of off-street parking facilities and $1,500,000 for construction of recreational facilities in city parks.

In the same election, voters turned down bond issues totalling $21,000,000 which would have included $2,000,000 for various city buildings; $1,500,000 for harbor improvements, and $10,000,000 for street repaving and bridge construction.

Several days before the bond election, ceremonies were held at the Friendship Church airport site to mark start of work on the 2,500-acre airfield, where some 6,000,000 cu.yd. of earth must be moved within the next year. City, state and national officials were present, including Maj. Gen. Cecil R. Moore (retired), airport director.

Water supply, sewage

Many cities took action during the week on plans for increasing or improving their water supply and sewage disposal systems.

Among those reporting water-supply work were: Salem, Ind., where a new reservoir is already in operation to double the city's available supplies; Pana, Ill., where voters approved a $130,000 bond issue for waterworks improvements including 14-in. mains; Winston-Salem, N. C., where city commissioners received an engineer's report recommending expenditure of $4,106,000 for an additional supply to be taken from the Yadkin River; and Harrison, Ark., where construction work started on a $99,000 water supply system. Dallas, Tex., reported difficulties in completing a $1,700,000 expansion program at its Bachman plant, when K. F. Hoefle, water superintendent, said that shortages of materials have so delayed the work that some rationing of water may be necessary this summer.

Sewage disposal plant work was ready to start at Boise, Idaho, where city officials signed a contract with the Chicago firm of Alvord, Burdick and Howson for surveys and plans for an $800,000 disposal plant. Although authorized by the city council last fall, the project was delayed because the engineering firm was not then licensed in Idaho.

Dallas, Tex., recently awarded a $617,000 contract to the E. H. Reeder Construction Co. for construction of the second step of the city's planned $4,500,000 East Bank interceptor sanitary sewer system.

Home rule wins

The town of Natick, Mass., won a court battle to protect its home rule on building laws when the state Superior Court upheld the town in a controversy with the state Emergency Housing Commission and the Soloray Corp.—builders of prefabricated houses.

The state organization had previously ordered the town to instruct its building inspector to issue a permit for completion of a partially-built prefabricated house (*ENR* Feb. 13, vol. p. 243) despite the town's objection that the structure did not conform to local building codes.

Superior Judge Harold P. Williams declared, in effect, that the state commission cannot overrule a municipalty's decision, nor can it order the municipality to make an exception to its building requirements if it does not so desire.

STREET SHORTAGE

Quincy, Ill., checking over its housing situation, discovered recently that houses are not the only shortage existing in the community.

There is also a shortage of city streets.

City councilmen issued a warning to builders not to erect new homes without being sure that all facilities will be available and to take care first where they erect the structures. Instances have been reported where homes have been erected where streets are platted, but where gas, water and sewer lines cannot be installed until grade levels of the streets have been determined.

Government offices

City, county and state officials at Louisville, Ky., are considering plans for construction of a $3,000,000 structure to house all local offices of the three governmental units.

Three possible financing plans have been proposed:

A city-county-state corporation to issue bonds; an outright county-financed project; or financing by current county tax levies. In any case, the debt would be retired by revenues from rentals to be charged to the agencies for space.

Street problems

Urgently-needed repaving and rehabilitation of city streets, and provision of off-street parking facilities in congested business areas continued to occupy the attention of city engineers' offices and planning groups.

The Massachusetts Supreme Court was asked to rule on the issue of building a 3,500-car garage under Boston Common, after preliminary hearings in lower courts. The state courts must decide the question since previous court decisions appear to make disposal of the Common a matter for state, rather than city, decision. Boston engineers, meanwhile, released a report estimating cost of the proposed underground structure at $5,000,000.

The planning board of Charlotte, N. C., considered plans for erection of a raised parking lot, about a block square, over one of the downtown railroad freight yards, and commissioned the Charlotte engineering firm of J. N. Pease Co. to prepare preliminary plans and furnish cost estimates.

Dayton, Ohio, city commissioners settled a dispute over routing of an

interregional superhighway by approving a route that would cut through the city, after hearing arguments from opponents who contend that such a highway should by-pass the city. At Fort Wayne, Ind., the Board of Public Works approved plans for rehabilitating three principal thoroughfares through widening and repaving.

Chicago airlines terminal

A new airline terminal in the heart of Chicago's downtown business and hotel district will be used exclusively for unloading or boarding passengers to and from the Municipal Airport, and will be ready for use within a few months.

The structure is to be built by United and American Airlines for joint operation, and all airport ground transportation for the two lines will operate from the building, thus eliminating numerous stops and resulting congestion at ticket offices scattered through the business district.

Toledo railroad station

Work on a $3,000,000 union railroad station at Toledo, Ohio, may begin this June, if the New York Central Railroad's application is approved by the CPA, railroad officials have announced.

First construction work will include tracks, platforms, and overhead station concourse, while construction of the station building itself probably will not begin until 1948. Sought by city officials for 30 years, the new station will be a 4-story structure, with waiting room above street level.

Kokomo planning group

For the first time in 25 years, Kokomo, Ind., has a city planning commission. Acting in anticipation of effectiveness of a new state law, Mayor Charles V. Orr named as members Mark Mayfield, contractor; Donald M. Snider, industrial engineer; Lotus A. Warden, city engineer, and three public representatives.

The group will act unofficially until Jan. 1, 1948, when the new state law becomes effective. Its first task, meanwhile, will be to overhaul city zoning ordinances.

Power plant contract

Coffeyville, Kan., city officials announced award of a $449,870 contract to the Wichita, Kan., firm of Dodlinger and Sons, for construction of a new municipal power plant building.

At the same time, contract for construction of the power plant chimney was awarded to the J. V. Boland Const. Co., St. Louis, Mo., on a low bid of about $48,000—including the cost of razing an old stack on the site.

Black and Veatch, of Kansas City, Mo., are consultants on the work.

War memorial

The Dayton, Ohio, war memorial committee has asked that the people answer a newspaper poll to determine public preference in construction of a $3,000,000 memorial to soldiers. The questions to be voted on are whether a sports arena and chapel shall be combined in one building, provided in separate buildings on the same general location, or in separate buildings in different locations.

Municipal stadium

Preliminary plans for a municipal stadium and war memorial have been presented to the Belmar, N. J., commissioners by Borough Engineer Claude Birdsall.

The Stadium and playing fields will be set up on the site of an existing memorial field.

Mr. Birdsall's blueprints call for a baseball diamond, regulation size, and a football field running north and south at the east end of the field.

There will be permanent concrete bleachers seating about 600 and two sets of removable bleachers setting an additional 2,000 spectators.

Another municipality that is now planning to construct a municipal stadium is Jacksonville, Fla. The city has just been authorized to sell $500,000 of revenue certificates to finance such a project.

As planned, the structure will be large enough to seat 35,000 persons.

Town to build own schools

When bids received recently by the Mead school district near Spokane, Wash., for the construction of two elementary schools exceeded the amount available by $50,000, the school board rejected the figures and decided to build the schools on a force account basis in an attempt to limit expenditures to $250,000.

The state attorney general ruled last year that second class school districts may build their own schools on a day labor basis and do not have to advertise for bids.

"The officials of the district have no quarrel with the contractors," said Earl C. Hills, school superintendent. "We realize that in taking a contract they are assuming a risk. As a matter of fact, we aren't sure we can build the schools for the $250,000."

The district feels itself forced to build now because its present buildings are too crowded.

***Under-water Cables**—The Consolidated Edison Co. of New York, Inc. recently completed a submarine crossing of the Harlem River, between upper Manhattan and The Bronx, with eight high-voltage electrical conductors and five electrical control cables. Dug into the river bottom by a dipper dredge which was forced to work at right angle to the trench line due to the narrowness of the stream, the trench is 401 ft. long. Cables were laid from a lighter warped across the river by means of winches and four anchors. Merritt-Chapman-Scott Corp. of New York City did underwater installation, while shore work was handled by the company's own forces.*

PERSPECTIVE . . . . .

College Building Program

American colleges have under way a $1,000,000,000 construction program, a recent survey of the U. S. Office of Education has revealed, and it is said they need twice as much more.

The survey report was presented May 6 to the Senate committee on labor and public welfare by Ernest V. Hollis, chief of the veterans' educational facilities program. In testifying on a bill (S. 971) to provide $250,000,000 of federal aid for construction by the colleges, he said that 1,167 institutions of higher learning, accounting for about 95 percent of the total enrollment in such schools, reported that they now have projects under way to provide 43,000,000 sq. ft. of non-housing space and 35,000,000 sq. ft. of residential space. He said that between now and 1950 these colleges will need a total of 180,000,000 sq. ft. of additional space costing more than $2 billion. The colleges will need federal assistance to complete the construction required to take care of the continued increase of enrollments.

At present the 1,167 schools have nearly two million students enrolled, 50 percent veterans. Surveys in cooperation with the Federal Works Agency have revealed that by the fall term of 1949 the total will reach 2,400,000 and by the fall of 1959, 2,700,000.

Plans are conservative

Before the war the institutions had sufficient non-housing plant facilities to provide 175 sq. ft. of floor space per student. Now this figure is only 110 sq. ft. and with the work assured to go ahead as part of the present program the amount will not be increased but actually drop, since enrollment is expected to increase more rapidly than added facilities can be constructed. Moreover, if the $2 billion program considered is carried out, the per-student non-housing floor space will have been increased to only 155 sq. ft.

With present projects the construction of increased classroom space accounts for a big share of the program, but the construction of laboratory facilities is an important part, as is the building of more library space and offices. The construction of single-student residences accounts for more than 50 percent of the housing work. Much of the work now in progress is of a temporary nature, but most of that being programmed is permanent building.

Little federal money available

Almost all of the $75,000,000 which Congress previously provided for the FWA's Bureau of Community Facilities for non-residential construction at schools where veterans are in attendance has already been spent. About $69,000,000 of this fund had been expended as of May 1 and the remainder will soon be used.

It was further reported that the Federal Public Housing Administration, in cooperation with the Office of Education, had spent the $178,000,000 Congress provided for temporary housing at colleges. It used war housing and other structures.

Senate hearings on S. 971 have now been completed. An early vote by the Senate is hoped for. A companion bill (H. R. 2845) is before the House, having been referred to the committee on banking and currency.

Texas to vote Aug. 23 on $60 million for colleges

The Texas legislature has approved the submission to voters in a special election on Aug. 23 a constitutional amendment providing a way of financing a $60,000,000 building program for state colleges.

The amendment provides for fourteen state colleges to issue approximately $45,000,000 in bonds in the next thirty years, divided into three 10-year periods. In each period, the colleges could issue 10-year bonds bearing interest which would not exceed 3 percent per annum.

Additionally, the amendment provides that, in the next 25 years, Texas A. and M. College can issue $5,000,000 in 20-year bonds and Texas University $10,000,000. Funds for the bond issues of these last two institutions would be derived from revenues from the state university permanent fund which has been long established.

Funds for the bonds for the other fourteen institutions would be derived from a special 5¢ tax to be levied on each $100 of property valuation.

University of Minnesota to build athletic plant

The University of Minnesota is considering expenditure of $2,650,000 for refurbishing and new construction of its athletic facilities. A fund for deferred maintenance, new construction and new property acquisition is estimated at $2,650,000, split as follows:

Replacement of entire roof on field house and immediate repair of outer walls, $300,000; immediate repair of underlying structure and stands in Memorial football stadium, $200,000; acquisition and development of 50 acres to relieve present crowded conditions and expand sports, $300,000; enlargement of stadium to increase present seating capacity by 20,000, $600,000; construction of new indoor sports building, $500,000, and construction of winter sports building, $750,000.

Two engineers honored at CCNY centennial

On May 7 when the College of the City of New York held special ceremonies commemorating the one hundredth anniversary of the chartering of the college, honorary doctorates were conferred on seven of its most noted alumni. Among them were these two engineers:

Gano Dunn, president of the J. G. White Co. and D. B. Steinman, consulting engineer, of New York City.

Mr. Dunn, 77, a specialist in electrical engineering, in 1939 was awarded the Hoover Medal for "distinguished public service."

Mr. Steinman, 61, has had a long and successful career as a civil engineer, specializing in suspension-bridge design. He is also the author of a recent book giving the history of the Brooklyn Bridge.

Canada unites colleges of Army, Navy and Air

The Royal Military College of Canada, long-established training center for all Canadian army engineer officers and for many civilian Canadian engineers, is to reopen in September, 1948, as a combined services training college, according to an announcement of Defense Minister Brooks Clexton. This is a further step in the integration of Canada's three fighting services, army, navy and air forces, as a postwar development.

Problems of overloaded sewage plant considered at sanitary group meeting

Maryland-Delaware Water and Sewerage Association at Washington also discusses sanitary landfills and water supply

How to meet special problems in overloaded sewage treatment plants and the best treatment method for specific industrial wastes received attention at the 2-day meeting of the Maryland-Delaware Water and Sewerage Association last week in Washington, D. C. Discussion of new water supply developments and reports on sanitary landfills were also included in the program.

Scum problem discussed

First discussion was on how to overcome the scum problem in operating overdosed sludge digesters without mechanichal agitation. Discussion began with a paper by Paul D. McNamee and J. E. Rice of the operating staff of the District of Columbia sewage treatment facilities, who reported that operation of their digesters was complicated because most of the digestion takes place in floating material at the top of the tank unless the dose is very light. No workable method of breaking up the scum has been found.

J. J. Gilbert of the Link-Belt Co., said that equipment could be installed that would keep the scum broken up. He concluded that the only real solution is construction of an additional digester tank, now planned.

On the same problem, W. A. Darby of the Dorr Co., concluded, "it appears that to control scum adequately mixers capable of turning over the entire contents of a tank in 30 to 120 min. are needed. In the Washington tanks, with a volume of 1,100,000 gal., this means that the mixing capacity should be from 9,200 to 36,700 gpm. This could not be done economically with external pumps and piping, but internal agitators having this capacity are now available."

This solution did not satisfy Paul P. Cerny of the Pacific Flush Tank Co., who said, "Mechanical agitation, is not the panacea for scum troubles in digester tanks. Such devices preceded the general use of the floating cover and their effectiveness is limited under loadings encountered today. The prime consideration is the maintenance of a favorable environment for the organisms which do the work. The solution is to keep the top sludge blanket moist, at optimum temperature, and sufficiently agitated to minimize entrained gas. Recirculation of heated liquor from the intermediate zone into the scum zone, possibly with the addition of deficient chemicals, such as ammonia nitrogen, in extreme cases, is the method we have found most effective."

Operating difficulties with sewage treatment plants built as part of the war housing program were outlined by R. Vanderwerker, senior sanitary engineer with the Federal Public Housing Administration. It is proving increasingly difficult to keep some of these plants operating effectively, in view of high loads and the emergency standards under which many of the facilities were built, he reported.

Treating paper mill wastes

W. Y. Irwin and A. H. French, of Congoleum-Nairn, Inc., in a joint paper, reported that paper mill wastes such as those from their firm's plant at Cedarhurst, Md., may be treated successfully for disposal into small streams if care is exercised in selecting the type of treatment used. This conclusion was reached after considerable work with a pilot plant treating the waste produced in manufacturing absorbent felt paper, for which the raw materials are principally rags, paper, and wood pulp. These men recommend a full-scale plant for lagooning of the mill effluent for about two weeks, followed by primary and secondary filtration.

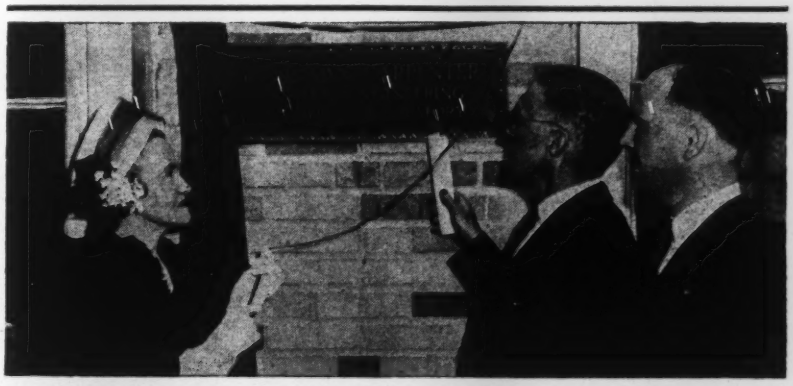
Before the lagoon effluent—which will have an average b.o.d. of about 2,000—is discharged onto the primary filter, it will be diluted with five times its volume of effluent from the secondary filter to reduce the b.o.d. to about 375. The primary filter discharge will pass through a settling basin before reaching the secondary filter, which will be followed by a secondary settling basin. The outflow from the latter will be divided with five-sixths of the total returned as diluting water to the primary-filter mixing chamber, and the remainder will pass through a chlorinating chamber for reuse or discharge.

Special design in prison plants

Special precautions are required in designing sewage treatment plants for federal prisons and similar institutions, a paper by Graham Walton, sanitary engineer with the Federal Bureau of Prisons, revealed. Normally these facilities must be designed for very high peak flows, high per-capita water consumption, and operation of the plant by the inmates, which restricts to a minimum the use of complicated equipment.

The bureau has found that Imhoff tanks are generally better than mechanically-cleaned clarifiers and separate sludge digestion tanks.

Use of sanitary landfills for disposal of municipal wastes has proved highly successful at Baltimore, George H. Elliott, Jr., of that city's department of public works, said. Results have proved much more economical than older methods when using a ratio of 50 percent of garbage and ashes to 50 percent of trash and street dirt. Benefits include the elimination of the need for a large incinerator, expensive scows, and considerable overtime work. Also, valuable park land is being made available, the haul of the collection equipment has been reduced.



***Engineer Honored**—New York University honored the late Prof. Lewis Van Carpenter on May 13 when the sanitary engineering research laboratory of the institution was named for him. Mrs. Tempie Carpenter Van Doren unveiled a plaque memorializing her late husband. Dean Thorndike Saville and Prof. Rolf Eliassen are at right. Professor Carpenter, who died in 1940, supervised construction of the laboratory, which is owned by the City of New York and operated by the university for investigation of sewage disposal methods, and for graduate student training.*

MEN AND JOBS

J. W. Wilson, Columbus, Ohio, former Franklin County engineer and employe of the central office of the Ohio Highway Department, who for the last two years has been connected with the U. S. Engineers, has been named construction engineer for Division 6 of the Ohio Highway Department, with headquarters in Delaware, Ohio.

Claude F. Burrell, former assistant borough engineer of Leonia, N. J., is now on a 1-year tour of duty in the highway department of Guam for the Pacific Island Engineers.

Raymond E. Layton has resigned from International Engineering Co., Denver, Colo., where he was employed as a civil engineer on the design of hydro-electric works in India and a railroad-highway bridge over the Yellow River in China, to become a civil engineer with Consoer Townsend and Associates, consulting engineers, Chicago, Ill. His present duties are on the design of sewage disposal plants

Current activities of H. A. Beck, acting superintendent on construction of the Carrizal, Venezuela, camp of the Creole Petroleum Corp., were described in the May 15 issue of Engineering News-Record.

tect-engineers.

Pat B. Smith has been appointed city engineer of Coffeyville, Kan. Smith served as city engineer at Pittsburg, Kan., from 1929 to 1932 and as a consulting engineer in that city from 1932 to 1934. From 1934 to 1939 he was employed by the Federal Works agency. Until recently he has been employed on several large jobs including sewage treatment plants in Coffeyville, Parsons, and Winfield, Kan. He also served as an engineer on the $5,000,000 City Market and Terminal Bldg., at Kansas City, and other engineering jobs in Oklahoma City, Memphis, Tenn., and Fort Worth, Tex.

Harry L. White, project engineer, has assumed charge of the Fargo, N. D. office of the Federal Public Housing Authority and its program for veterans' emergency housing in North Dakota and part of Minnesota and South Dakota. He succeeds **Norman Saper,** who has been transferred to the Chicago office.

Harlan E. Chase, Oklahoma City, Okla., has been named engineer in charge of Oklahoma City's $15,000,000 bond issue program. He succeeds **Stoner K. McClelland,** who recently resigned. He formerly was associated with the firm of Hudkins-Thompson-Ball, architect-engineers.

Lawrence N. Lydick has been named to fill an administrative post created jointly by the Mission Township board and the Mission Township zoning board in eastern Johnson County, Kan. Lydick was Kansas highway department resident engineer on the U. S. Highway No. 50 construction project. He will supervise the administrative work on the plotting of new subdivisions, the issuing of building permits, repair and maintenance of township roads and other construction or engineering for the township. He was graduated from Kansas State College in 1930.

H. McIvor Weir has been named city engineer of Saskatoon, Sask., replacing the late George D. Archibold. Mr. Weir was graduated from the University of Toronto in 1901.

Walter G. Metschke has been named engineer to plan the Omaha, Neb., $300,000 Parks and Recreation Committee program for 1947. He was with the Army Engineers. He was formerly with the Fort Smith, Ark., Park Board; Federal Public Housing Authority; and Works Progress Administration.

Jack Knight of Montgomery, Ala., has been appointed senior planning technician on the staff of the State Planning Board by Director W. O. Dobbins. A graduate of Alabama Polytechnic Institute, he has been assigned to city planning duties.

Paul Barnes of the Dakota Engineering and Construction Co. at Valley City, N. D., has been selected by Southwest Fargo to do the engineering work in the city water and sewer project.

Neely J. Cromer, district engineer at Winston-Salem, N. C., for the North Carolina Highway Commission, has resigned to enter business and has been succeeded by **R. B. Fitzgerald,** of Lenoir, N. C., who has served for the last six years as division office engineer and senior resident engineer.

Richard W. Yost, who served as a captain in the U. S. Corps of Engineers in the war, has been named city engineer and administrative officer of Marianna, Fla.

J. Alexander Crothers has been appointed director of the Port of Boston

Members of the Columbia Basin Inter-Agency Committee stand for a "breather" during recent sessions. Left to right they are: C. H. Raymond, advisory member from Montana; R. J. Newell, Bureau of Reclamation; Gov. C. A. Robins of Idaho; Col. Theron D. Weaver, Corps of Engineers, Portland, Ore.; L. S. Wing, Federal Power Commission, San Francisco; L. C. Bishop, advisory member from Wyoming; E. H. Watson, advisory member from Nevada, and George Hudson, of the Department of Agriculture, stationed at Wenatchee, Wash.

Authority. **A graduate of the University of Delaware, and a veteran of both world wars, Mr. Crothers in the last war was port commander at Cherbourg and Bremen. He leaves the general managership of the South Jersey port district, and succeeds Maj. Gen. Clarence H. Kells, resigned.**

J. L. Gillespie, city engineer of Hapeville, Ga., has been made city manager.

The consulting firm of Foster-Wachter has been organized with offices at 55 W. 42d Street, New York 18, N. Y., to specialize in the design and specifications for cableways and hoisting equipment. **Jed S. Foster** was for many years chief engineer of the Ledgerwood Mfg. Co. **Charles L. Wachter** during the war was consulting and resident engineer for several industrial concerns. He is a life member of the A.S.C.E.

Leroy B. Bartlett, of Superior, Wis., has been appointed director of public works in Hamilton, Ohio.

Alfred E. Newhouse, Columbus, Ohio, has been appointed city engineer of Wooster, Ohio.

Robert L. Findlay, architectural engineer, has been named Youngstown, Ohio, city building inspector and zoning engineer, succeeding Paul Boucherle, resigned.

Ward T. Johnson has recently been employed by the Illinois Division of Waterways, Springfield, as engineering aide.

R. H. Workinger has been transferred from the Washington, D. C., office of the Bureau of Reclamation to Billings, Mont., to become executive officer of the Region 6 Missouri Basin Project Activities Staff. He has been associated with the Department of the Interior since 1940, with the exception of two and one-half years in the Army.

William D. Williams, Philadelphia, Pa., has joined the staff of the Phoenix, Ariz., office of the U. S. Bureau of Reclamation to work on plans for the Central Arizona project.

Neil M. Loney has opened an office as industrial consultant at 901 Fisher Bldg., Detroit 2, Mich. He is experienced in plant construction.

Charles A. Hatch, former secretary and engineer of the Toledo-Lucas County, Ohio, Planning Commission, has been employed by the Board of County Commissioners to draw up a new building code.

Morton W. Lieberman has opened an engineering office at 5 Maiden Lane, New York 7, N. Y.

Lloyd R. Womble of Silver City, N. C., has been named county surveyor of Chatham County, succeeding his father, Floyd E. Womble, who held the post for more than 30 years.

Charles Guard has resigned as Warren County, Ohio, engineer and will do private engineering and surveying.

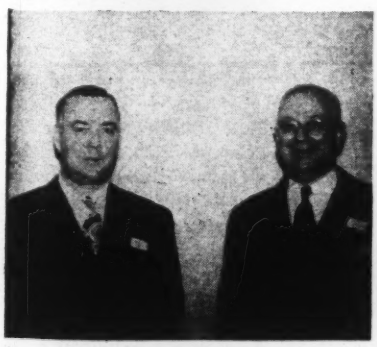
Robert B. Brooks, consulting engineer, St. Louis, Mo., has been elected president of the Safety Council of Greater St. Louis. He has been one of three re-appointed by Mayor A. P. Kaufmann as a member of the City Plan Commission, which has recently been given added legal powers.

Fred Ilett, chief clerk in the Lucas County sanitary engineer's office at Toledo, Ohio, for 15 years, has been named chief clerk in the County Engineer's office. **John Deeds** succeeds Mr. Ilett, and **Harry Carter,** field engineer in the sanitary engineer's office, was named first assistant to **Ray Hall,** county sanitary engineer.

Kenneth Jenkins, Cardington, Ohio, has been named Morrow County engineer at Mt. Gilead, succeeding **Oliver C. Richey** who resigned.

Promotions of two assistant resident engineers to become resident engineers at Newport News and Wise, Va., are announced by the state highway department. **H. A. Fennell,** since 1945 assistant at Newport News in the Suffolk highway district, will become resident engineer to succeed **Marshall B. King,** resigned. **L. R. Treat, Jr.,** since 1946 assistant at Fairfax, will step up into the Wise residency in the Bristol District as successor to the late J. R. Crill.

George S. Hipp (left), of Indianapolis, Ind.; Samuel C. Hadden, Chicago consulting engineer, and Walter Bruner, supervisor of right-of-way for the Indiana highway department, look over a portion of the route of the Chicago-Detroit expressway near Hammond, Ind.



S. T. Anderson (left) is new chairman of the Illinois Section, American Water Works Association, succeeding John P. Harris at a recent annual meeting in Chicago. Mr. Anderson is head of City Water, Light and Power at Springfield.

On a high peak overlooking the Davis Dam site on the Colorado River, Jack Shankland (left) engineer for the Bureau of Reclamation's regional office in Boulder City, gets posted by Jim Seery, project progress control officer for the bureau.

Elmer Olsen (left) is general superintendent for Merritt, Chapman and Scott, general contractors, and C. H. Griffin is general foreman on the Navy's $13,000,000 program for storing "reserve" ships at Green Cove Springs, in Florida.

ENGINEERING SCHOOL NEWS

Fluid mechanics at Michigan summer session—Two new degree courses at Mississippi—Other curricula and faculty changes

The University of Michigan will conduct a symposium on fluid mechanics from June 23 to August 16. It will be directed by Prof. Hunter Rouse, director of the Institute of Hydraulic Research of the State University of Iowa, and Prof. Sydney Goldstein of the University of Manchester, England. Lectures and seminars will be given by guest teachers, including Boris A. Bakhmeteff, professor of civil engineering, Columbia University; Hugh L. Dryden, assistant director, National Bureau of Standards, Washington, D. C.; J. E. Warnock or D. J. Hebert of the Bureau of Reclamation; L. G. Straub, professor of civil engineering and director of the St. Anthony Falls Laboratory, University of Minnesota; John Stack, chief of the compressibility division, NACA Laboratory, Langley Field; V. L. Streeter, research professor in mechanics, Illinois Institute of Technology; M. J. Thompson, professor and chairman of aeronautical engineering, University of Texas; and T. von Karman, director, Guggenheim Aeronautical Laboratory, California Institute of Technology.

Several men from the faculty of the University of Michigan will participate, including Prof. G. E. Uhlenbeck of the department of physics and professors L. A. Baier, E. F. Brater, R. A. Dodge, W. W. Hagerty, A. M. Kuethe, J. D. Schetzer, E. T. Vincent and R. R. White, all of the college of engineering.

A 2-story frame building constructed for the U. S. Army at Camp Shanks, near Nyack, N. Y., will be re-erected about sixty miles away at the engineering camp of Stevens Institute of Technology near Johnsonburg, N. J. The building, given to the college by the government, is being taken down, moved and reconstructed by the Public Works Administration as a part of a program to help educational institutions handle their record postwar enrollment. The building will be ready for use by the opening of the camp on June 11.

The school of engineering at the University of Mississippi has broadened its courses to include two new degrees. The bachelor of science degree in general engineering has been changed to a degree in engineering administration. Students will take basic engineering courses, but also elementary and advanced courses in accounting, economics, and business organization.

In addition, courses leading to the bachelor of science degree in geological engineering will be offered. These will consist of basic engineering subjects, elementary and advanced geology, mathematics, and hydrology.

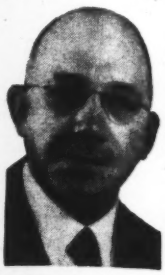
These new courses are part of changes in the civil engineering curriculum to provide two options—construction engineering and hydrology. To meet increasing need for broader training the comprehensive program further provides for 5 and 6-year curricula.

These appointments to the faculty of the University of Buffalo School of Engineering have been announced: Robert E. Shaffer, associate professor of engineering; Walter H. Sherry, assistant professor of engineering; Arthur G. Bierma, instructor in engineering, and Frances E. Gruen, instructor in engineering. Faculty enlargement results from the great growth of the 2-year-old division. The school now has 1034 students.

Five new instructors have joined the faculty of the school of engineering at the Alabama Polytechnic Institute. They include Coleman Herndon McGehee, instructor in aeronautical administration; Fred M. Hudson, civil engineering; Alton S. Little, engineering drawing and design; Robert L. Ferrell, mechanical engineering; and George Jackson Tankersley, mechanical.

***Balconies Featured**—Individual apartment balconies and terraces are featured in a 15-story-and-penthouse cooperative apartment now under construction by Sam Minskoff and Sons at Madison Avenue and 74th St., New York City. One hundred apartments are planned. The structure will incorporate controlled-temperature radiant heat, and will provide restaurant and maid service.*

For reasons of health, E. A. Holbrook, for 20 years dean of the schools of engineering and mines at the University of Pittsburgh, is planning to retire at the close of this academic year. He went to Pitt in 1927 when the enrollment was only 400. Today it is more than 2,200.



Dean Holbrook

Dean Holbrook is president of the National Society of Professional Engineers. For six years he was chairman of the national committee in charge of inspecting and accrediting American engineering colleges. Last November he was named consultant for the Department of Commerce's industrial relations department. For 14 years he has served as member of the state's sanitary water board.

Case Institute of Technology, Cleveland, Ohio, will offer a new curriculum in engineering administration starting in September, 1947. It will provide a foundation in scientific and technical subjects supplemented by training in business methods and personnel relations. Students in industrial engineering will take courses in accounting, business law, business reports and letters, personnel relations, corporation finance, and marketing and will be prepared for managerial positions in industry. The new program will be available for both undergraduate and graduate students. Dean Elmer Hutchisson said that Case is inaugurating this new curriculum to meet a long-felt need by industry.

The school of engineering of Southern Methodist University at Dallas, Tex., recently held an all-day open-house for the public. Samples of the work of 750 civil, electrical and mechanical engineering students were displayed.

Last month training classes for positions in the retail building materials and lumber fields were started at the university. They are sponsored by the National Retail Lumber Dealers Association and the Veterans Administration, and are open to veterans under the G. I. Bill, but non veterans may attend by paying tuition. The students attend 30-day lecture courses, the subjects including construction, building products, estimating, and building procedures.

OBITUARY

Edward P. Galer, 65, who retired last year as president of the Galer Equipment Co. of New York, died in St. Petersburg, Fla., May 18. He was a captain of engineers in the first world war and steel erection became his life work. He was with the Turner and George A. Fuller companies before founding his own.

Clarence K. Conard, 71, civil engineer with the Board of Estimate, New York City, from 1923 to 1943, died at New Paltz, N. Y., May 16. A graduate of Cornell University, 1898, he was a construction engineer for the B & O Railroad, the Erie, and the Southern. In New York he specialized in tunnel engineering and grade crossing elimination. From 1899 to 1900 he was in Nicaragua with a canal survey party.

Edmund M. Sawtelle, 77, a retired consulting engineer of New York City, died May 18 at Ogunquit, Me. A graduate of Lehigh University, 1889, he was a captain in the Army Engineering Corps in the Spanish-American war and in the first world war was Alien Property Custodian for the Port of New York.

Joseph S. Pecker, 55, a consulting engineer at Philadelphia, Pa., for more than 30 years, died May 6 in New York City. A former president of the Machine and Tool Co. in Philadelphia he had been a resident of Beverly Hills, Calif., since his retirement more than two years ago. He was a graduate of Drexel Institute of Technology.

Berton H. Williamson, of East St. John, N. B., for the last 25 years a contractor specializing in the construction of highways in the provinces of New Brunswick and Nova Scotia, died May 11, at East St. John.

Harold Boericke, Sr., 63, a civil engineer, died recently at Philadelphia, Pa. He retired three months ago as a member of the Primos Chemical Co., Primos, Delaware County, Pa. He was graduated from the University of Pennsylvania in 1905.

Edwin B. Tilt, 68, died April 20 in Montreal, Can. An engineering graduate of McGill University, during the first World War he was director of shell testing for the Canadian government and in the last war he was vice-president of the National Munition Co.'s plants at Olean, N. Y.

Jay W. Moorhead, 72, former construction superintendent for the Elmira Light, Heat & Power Co., died recently in Elmira, N. Y. He directed the erection of transmission and substation facilities throughout the Elmira area from 1926 to 1938.

Andrew Weston, 75, president of Andrew Weston Co. Inc., contractors, of Woodmere, N. Y., died May 3. His company built the Lake Champlain highway bridge between Rouse's Point, N. Y., and Altburg, Vt.

Railroad challenges state on right to take land

Suit to restrain Ohio Highway Director Murray D. Shaffer from appropriating the Pennsylvania Railroad's passenger station property in Youngstown has been filed in Franklin County Common Pleas Court. The railroad seeks to establish the principle that in a case where a common carrier is concerned, the state does not have "priority of eminent domain".

The state highway department has been negotiating for the purchase of the Pennsylvania's station in Youngstown for several months, as it requires the site for the $1,500,000 Spring Common bridge project over the Mahoning River.

The highway department has offered $94,000 for the land occupied by the station and the passenger facilities at Spring Common, but the railroad maintains that the property is worth much more than that.

MAJOR MEETINGS

American Shore and Beach Preservation Association, 21st annual meeting, The Berkeley Carteret, Asbury Park, N. J., May 27-28.

American Society for Testing Materials, 50th annual meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., June 16-20.

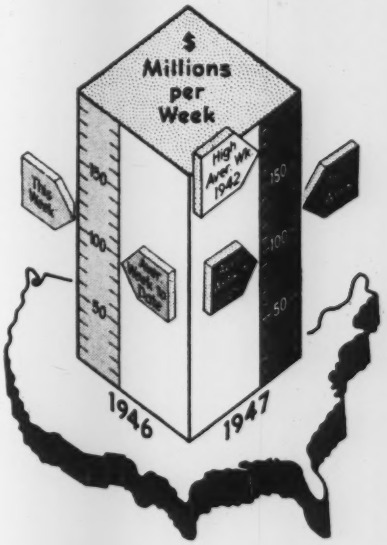
American Society of Engineering Education, annual meeting, University of Minnesota, Minneapolis, Minn., June 17-21.

President's Highway Safety Conference, Action Program group, Auditorium, Department of the Interior, Washington, D. C., June 18-20.

American Water Works Association, 67th annual conference, jointly with Federation of Sewage Works Association, 20th annual meeting, Civic Auditorium, San Francisco, Calif., July 21-25.

Federation of Sewage Works Associations, jointly with American Water Works Association. See above.

CONSTRUCTION ACTIVITY



As Reported this week to . . .
Engineering News-Record

CONTRACT VOLUME

Continental U. S. Only (Thousands of Dollars)

	Week of May 22 1947	Cumulative 1947 (22 wks.)	Cumulative 1946 (22 wks.)
Federal	$28,656	$220,361	$243,355
State & Mun.	29,891	612,614	461,369
Total Public.	$58,547	$832,975	$704,724
Total Private	54,617	1,251,489	1,300,138
U. S. Total	**$113,164**	**$2,084,464**	**$2,004,862**

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Dollar Volume (Thousands)

Type of Work	This Week	Cumulative 1947 (22 wks.)	Cumulative 1946 (22 wks.)
Waterworks	$1,328	$48,603	$40,863
Sewerage	1,464	43,412	25,937
Bridges	2,506	62,135	46,315
Highways	17,783	277,269	260,583
Earthwork, Waterways	1,492	103,403	147,858
Buildings, Public	15,976	203,101	117,420
Industrial	14,880	326,627	403,445
Commercial ..	35,841	732,423	818,839
Unclassified	21,394	287,491	143,602

NOTE: Minimum size projects included are: Waterworks and waterway projects, $22,500; other public works, $40,000; industrial buildings, $55,000; other buildings, $205,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1947 (22 wks.)	Cumulative 1946 (22 wks.)
NON-FEDERAL $648,807		$382,760
Corporate Securities	$215,244	156,772
State and Municipal	433,563	225,988
FEDERAL	.....	158,320
Total Capital $648,807		**$541,080**

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost	May '47	396.49	190.59
Building Cost....	May '47	299.61	161.96
Volume	Apr. '47	247	108

CONSTRUCTION REPORTS

Bids Asked—Low Bidders—Contracts Awarded

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ELSIE EAVES, Manager *J. A. MAHONEY, Reports* *E. R. BIGGERSTAFF, M. R. ROESSLER, Statistics*

WATER SUPPLY

Construction Reports received since this section went to press will be found in Last Minute Construction Reports.

BIDS ASKED

Bids Asked May 26

Pa., Claysville—Boro, Claysville, concrete, brick water filtration plant and 6 in. watermains. $35,000.

Bids Asked May 27

†Md., Pocomoke City—At office, Mayor and Council, Municipal Bldg., water supply sys. imprvs. incl. one or more 4 in. test wells, one 16x10 in. permanent gravel wall well and one or more 2 in. sentinel wells. Plans deposit $10. Clarke Gardner, Salisbury, consult. engr.

Bids Asked May 28

Mich., Birmingham—Irene E. Hanley, city clk., deepwell turbine pump with motor, 60 ft. column, pump capacity 800 to 1,000 gal. per min. at peak efficiency against head of 255 ft. Over $22,500.

Wis., Brownsville — Brownsville Sanitary Dist., Brownsville, WW materials, installing WW distr. sys., elevated tank, sanitary sewerage sys., sewage plant equip., deep well. $97,450. Plans deposit $10. Foth & Porath, Inc., 409 E. Walnut St., Green Bay, engr.

Wis., Eau Claire—City, water distr. sys. and sanitary sewerage sys. addns. Plans deposit $25. Greeley & Hansen, 220 S. State St., Chicago, Ill., engrs. CD 12/9—ENR 12/26.

Bids Asked May 29

Ont., Nipigon—W. L. Wade, clk. Nipigon Twp., WW plant incl. intake, pump. stations, gravity filter plant and 2,900 ft. 6 in. watermain. Approx. $80,000. Gore & Storrie, 1130 Bay St., Toronto, engrs.

Bids Asked June 2

Mich., Grand Rapids—Wyoming Twp., D. DeZwaan, clk., 1971 Godfrey Ave. S. W., watermains, incl. 77,610 ft. 6- to 12-in. cl.i. pipe. Plans deposit $10.

N. Y., Oyster Bay — New York State Conservation Dpt., Broadway Arcade Bldg., Albany, 2 drilled wells at Cold Spring Harbor Fish Hatchery. Plans deposit $2.

Bids Asked June 3

Calif., San Diego—City, Civic Center Bldg., Commercial St. water pipeline, Imperial Ave. and Churchward St. to Harbor Dr., incl. 23,200 ft. 24- to 36-in. rein.-con. pipe. Over $22,500. Plans deposit $10.

N. C., Mount Airy—Town, J. C. Hill, clk., water and sewer imprvs. Plans deposit $25. The Linberg Engineers, Box 935, Burlington, engrs. CD 1/24—ENR 2/6.

Bids Asked June 13

Wash., Stevenson—Skamania Public Utility Dist. 1, Stevenson, installing 30,700 ft. pipe and constructing 2 concrete reservoirs and 2 pumphouses. Over $22,500. Plans deposit $15.

Bids Asked About July 1

Ill., New Canton—City, City Clk., New Canton. WW sys., incl. supply, tank on tower, pumps, distr. sys., 2- to 6-in. c.i. mains, hydrants, etc. Approx. $70,000. Everett C. Meyers, c/o Meyers & Foster, 2090 Big Bend Blvd., St. Louis. Zone 17, engr.

Bids Asked About September 1

Mo., New Florence—Village, Elmer Zwerfel, chn., WW sys., incl. 1,000 ft. deep well, pump, pump house, tank on tower, 2- to 4-in. c.i. distr. mains, hydrants, etc. $70,000-$80,000. Everett C. Meyers, c/o Meyers & Foster, 2690 Big Bend Blvd., St. Louis, Zone 17, engr.

Mo., Winfield—Village, F. E. Birkhead, clk., WW and distr. sys., incl. supply, pump, elevated tank, distr. sys. 2- to 6-in., etc. $67,372. Everett C. Meyers, c/o Meyers & Foster, 2690 Big Bend Bldv., St. Louis, Zone 17, engr. CD 1/3—ENR 1/9.

LOW BIDDERS

Miss., Jackson—City, May 7, water intake sys. on Pearl River, from Traylor Bros., Inc., Upper Mt. Vernon Rd. ,Evansville, Ind. $239,168. CD 4/7—ENR 4/17.

Okla., Bartlesville—City, rejected bids Apr. 21, water purification plant, L. B. $586,000; elevated storage tank, L. B. $41,270; filter plant equip., L. B. $87,000; earthen dam and spillway, L. B. $476,376. CD 5/7—ENR 5/15, under L. B.

Tex., Robstown—Nueces Co. Water Dist. 3, W. B. Messer, mgr., Robstown, May 8, filter plant imprvs., from Lee Aikin, Corpus Christi, $77,800. Est. $35,000. CD 4/21—ENR 4/24.

Wash., Pasco—City, City Hall, rejected bids May 6, Unit 1 of filtration plant. L. B. $199,889. CD 3/28—ENR 4/3.

Wis., Hustisford — Village, rejected bids Apr. 7, WW, sanitary sewers. L.B. $171,557. Project temporary in abeyance. CD 4/16—ENR 4/24. Under LB.

CONTRACTS AWARDED

Ark., Malvern—Malvern Waterworks Comn., Malvern, water treatment plant, to Midwest Contg. Co., 403 S. Haskell St., Dallas, Tex. $54,894. Bids 4/6. CD 4/16—ENR 4/24.

Neb., Valentine—City, watermains, to A. C. Smith, Constr. Co., Scottsbluff. $39,016. Bids 5/5. Harold Hoskins, Trust Bldg., Lincoln, engr.

Okla., Perry—City, elevated water storage tank, to Chicago Bridge & Iron Works, 332 S. Michigan St., Chicago, Ill.. $73,630. Est. $75,-000. Awarded 5/6. V. V. Long & Co., Colcord Bldg., Oklahoma City, engrs.

Pa., Phila.—Dpt. P. Wks., City Hall, filter plant imprvs. WW1-321, to Warren J. Cathcart, 4636 Paul St. $32,348. Bids 5/2, awarded 5/9 CD 4/23.

Pa., Pleasant Hills (Pittsburgh P. O., Zone 17)—Comrs. Jefferson Twp. Pleasant Hills, Pittsburgh, Zone 17, municipal water sys., watermains, pump. station, stand pipes, Contr. 1A, to Frank Mannella Constr. Co., 7003 Chaucer St., Pittsburgh, $72,857***Contr. 2A, to Boquet Constr. Co., 4662 Old Boston Rd., Pittsburgh, $42,529***Contr. 3, to Frank Kukurin & Sons, Wilmerding, $87,577***Contr. 4A, to T. D. Stablow, Rochester, $46,635*** Contr. 5, to E. H. Dobson, 145 Westlake Dr., Pittsburgh, $16,840***Contr. 7, to Chicago Bridge & Iron Works, 2872 E. 33 St., Cleveland, O., $12,625. Grand total $279,063.

Tex., Beaumont—City, 8,500 lin. ft. 8 in. screw joint water pipe main for portions of Pinecrest and Woodlawn Sects., force account. $29,000. George Schaumberg, City Hall, engr. CD 6/13—ENR 6/27.

Tex., Houston — City, M. H. Westerman, secy., 16 in. c.i. watermains in Clinton, Lyons and adjacent streets to connect with Northeast Pump. Station, Purchase and Hire. $175,000. CD 6/30/44—ENR 7/13/44.

Wash., Tacoma—City, City Hall, 23,143 ft. 58 in. steel pipe for water supply line, to American Pipe & Constr. Co., 518 N. E. Columbia Blvd., Portland, Ore. $591,676. CD 5/6—ENR 5/8, under LB.

Wis., Milwaukee—City, laying watermains in Burleigh St., to L & L Service Co., 906 E. Center St., Zone 12. $32,346. Bids 5/6, awarded 5/7. J. P. Schwada, city engr.

Man., Winnipeg — Chn. Public Utilities Comn., City Hall, watermain in Dominion St., etc., to G. Gelhorn & Sons, 637 Cathedral Ave. Est. $50,000. Bids 3/31. CD 3/20—ENR 3/29.

PROJECTS COVERED

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks $22,500; other public works $40,000; industrial buildings $55,-000; other buildings $205,000.

Classes of Construction

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED WORK: Including appointment of engineers or architects.

BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR.;

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Symbols and Abbreviations Includes

† Federal Government
★ Project of $1,000,000 or over.
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

SEWERS, WASTE DISPOSAL

Construction Reports received since this section went to press will be found in Last Minute Construction Reports.

BIDS ASKED

Bids Asked May 27

N. J., Weehawken — At Office, Executive Dir. Port of New York Authority 111 8 Ave., New York 11, N. Y., sewer in Hudson Co. Blvd. East. Plans deposit $10.

Wis., Ladysmith—City, 2 sewage pump. stations with force main and river crossing. CD 3/18—ENR 4/27; sewage treatment plant, appurtenances, L.B. $239,750, CD 4/30—ENR 5/8. Bids 4/15 rejected. Plans deposit $25. Banister Eng. Co., 1549 University Ave., St. Paul, 4, Minn., engr.

Bids Asked May 28

Ill., Chicago—City, Dpt. P. Wks., City Hall, auxiliary outlet sewers, Addison St. Sys., concrete 2-ring, brick, vitr. tile pipe, etc. Plans deposit $50. CD 3/19/45—ENR 4/5/45.

Wis., Lena—Village, sanitary sewerage sys., watermain distr. sys., deep well. Plans deposit $10. Foth & Porath, Inc., 409 E. Walnut St., Green Bay, engr. CD 9/23/43—ENR 9/30/43.

Bids Asked May 29

Ala., Arab — City, c/o Woodrow Hinds, mayor, Arab, sanitary sewerage sys., incl. 13,800 ft. 8 in. vitr. clay and 670 ft. 6 and 8 in. c.i. pipe, 57 manholes, sewage pump. station, imhoff tank, and 500 cu. yd. excav. J. W. Goodwin Eng. Co., 726 S. 29 St., Birmingham, engr. CD 3/13—ENR 4/3.

Wis., Coleman—Village, sanitary sewerage sys., water distr. sys., water distr. sys. materials, deep well, elevated tank. Plans deposit $10. Foth & Porath, Inc., 409 E. Walnut St., Green Bay, engr. CD 11/14/45—ENR 11/29/45.

Bids Asked June 2

Ia., Newton—City, sewage plant. Approx. $45,000. Brown Eng. Co., K. P. Bldg., Des Moines, engr. CD 5/20/46—ENR 5/30/46.

Ind., Rockville—Town Bd., L. I. Woodward, pres., Rockville, sewage treatment plant imprvs., incl. control bldg., grit chamber, sewage shredder and flow measuring equip., trickling filter and dosing tank, final settling tank, sludge bed, altering Imhoff tank and grit chamber. $65,000. Plans deposit $15. Bids 5/6 rejected. T. T. Hardman Assoc., Hippodrome Bldg., Terre Haute, consult. engrs. CD 4/16—ENR 4/24.

Wash., Sunnyside—City, City Hall, trunk sewer, underdrain and lateral sewerage sys. Over $40,000. Plans deposit $25. G. D. Hall, Larson Bldg., Yakima, engr.

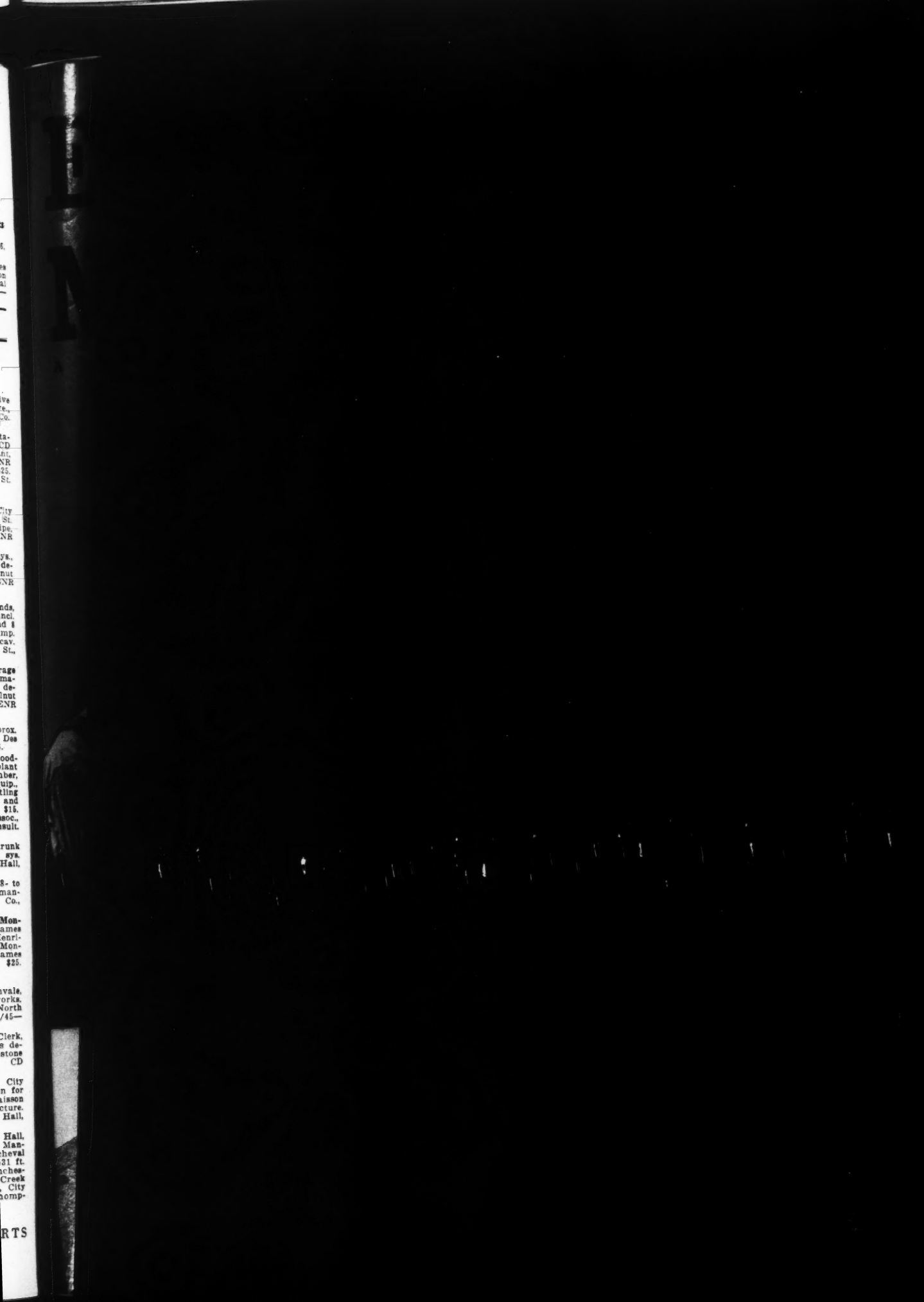
Wis., Rio—Bd. P. Wks., Rio, 19,110 ft. 8- to 12-in. vitr. clay sanitary sewers, 540 ft. manholes. Plans deposit $10. General Eng. Co., Portage, consult. engr.

Que., Montreal North (Postal Dist. Montreal)—J. N. Langelier, engr., 10 E. St. James St., Montreal, sewers in Plaza, Ethier, Henrietta,, Drapeau and Balzac Sts., for Montreal Metropolitan Comn., 10 E. St. James St., Montreal. $90,000. Plans deposit $25. CD 6/7/45—ENR 6/21/45.

Bids Asked June 3

Kan., Miltonvale—City Clerk, Miltonvale, sanitary sewerage sys., sewage disposal works. Plans deposit $10. Wilson & Co., 223 North Santa Fe St., Salina, engrs. CD 12/13/45—ENR 12/27/45.

†Ky., Russellville — City, c/o City Clerk, City Hall, sewage disposal works. Plans deposit $30. Howard K. Bell, 553 S. Limestone St., Lexington, Zone 45, consult. engr. CD 10/16—ENR 10/24.

Mich., Detroit—City, Dpt. P. Wks., City Hall, constructing Bluehill Pump. Station for storm water, incl. rein.-con. circular caisson substructure and rectangular superstructure. Plans deposit $25. G. R. Thompson, City Hall, city engr. CD 8/8/44—ENR 8/24/44.

Mich., Detroit—E. Jones, 104 City Hall, 2,194 ft. 16 ft. diam. concrete sewers in Manchester Ave. from Manistique to Kercheval Aves., 3,922 ft. 13½ ft. diam. sewer; 4,531 ft. 14½ ft. diam. Kercheval Ave. from Manchester to Bedford Aves., all foregoing Fox Creek Relief Sewer Section, for Dpt. P. Wks., City Hall. Plans deposit $25 each. G. R. Thompson, City Hall, city engr.